***Curriculum Vitae***

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***Educational Background:***

1. Virginia Polytechnic Institute and State University (Virginia Tech), May 1996. Ph. D. Degree in Immunology. “Role of Autocrine Growth Factors in Tumorigenic Transformation of T cells”.
2. Kuwait University, School of Medicine, August 1989 to July 1990. (Master’s Program in Pathology, Interrupted by Events in the Gulf).
3. Kuwait University, May 1988. B. Sc. Degree (Zoology).

***Professional Experience:***

* **Assistant Professor**, University of Jordan, Departments of Biological Sciences. Faculty of Science. October 2000- to date
* **Visiting Assistant Professor,** University of South Carolina, Department of Pathology Microbiology Immunology, School of Medicine. May 2012 – September 2012.
* **Assistant Dean for Students Affairs, ,** Faculty of Science, University of Jordan, September 2003- September 2004; December 2009 – August 2010.
* **Assistant Dean for Development Affairs, ,** Faculty of Science, University of Jordan, September 2004- September 2005.
* **Research Associate**, Virginia Polytechnic Institute and State University, Biology Department in Dr. Nagarkatti’s lab. July 1999- September 2000.
* **Assistant Professor**, Jordan University for Science and Technology (JUST), Joint Appointment in the Departments of Applied Biology and Medical Technology. Faculty of Arts and Sciences and Faculty of Medicine. September 1996-September1999.
* **Teaching Assistant**, Virginia Polytechnic Institute and State University, Department of Biology, January 1992 to May 1995. (Taught laboratory courses for General Biology and Immunology).
* **Teaching Assistant**, Kuwait University, Department of Zoology, August 1988 to September 1989. (Taught laboratory of the following courses: General Biology, Cell Biology, Immunology, Physiology, Neurophysiology and Genetics).

***Scholarships/Awards/Grants:***

* Hamdi Mango Center for Scientific Research, Jordan University, Production of Novel Monoclonal Antibodies that Distinguish Between Cannabinoid Receptors CB1 and CB2, 15,000 JD September 2009.

1. Deanship of Scientific Research, Jordan University. Assessment of the ability of Jordanian propolis to suppress the growth of tumor cells. 11000 JD, June 2009.
2. King Hussein Cancer Center and the National Biotechnology Center, The Higher Council for Science and Technology. The Characterization of Novel Monoclonal Antibodies Generated Against Human Breast Cancer and T Cell Leukemia. 24000 JD, May 2007
3. The Higher Council for Science and Technology, The National Net Work for Nanotechnology and Advanced Material. Assessing the Feasibility of Using Novel Locally Generated Fe- based Nanoparticles in the Cancer Diagnosis and Therapy. 20000 JD, Mach 2006.
4. Deanship of Scientific Research, Jordan University, Assessment of the Role of Interleukin 15 (IL-15) in the Tumorigenesis and proliferation of Human Tumor Cells, 16000 JD, August 2003.
5. Hamdi Mango Center for Scientific Research, Jordan University. Comparative, controlled pilot study to determine the anti-tumor potency of New Dihydroazepine-fused Indoloquinolines on tumor cell lines, 10000 JD, May 2003.
6. Deanship of Scientific Research, Jordan University fro Science and Technology. Immunomodulatory effect of pesticide commonly used in Jordan on the immune system, 3000 JD, July 1997.
7. Graduate Research Assistantship, Nagarkatti lab, $2500, Spring 1996.
8. Graduate Teaching Assistantship, Biology Department, Virginia Tech, Spring 1992 - Fall 1995.
9. Full Instructional Fee Tuition Waiver, Biology Department, Virginia Tech, $6000, Fall 1994, Spring and Fall 1995.
10. Sigma Xi Grants-in-Aid of Research Award. Role of Autocrine Growth Factors in the Tumorigenic Transformation of T cells. $450, Spring, 1994. Plus matched award by the Biology Department, Virginia Tech, $450, Spring, 1994.
11. Awarded first place in the student paper competition, Virginia Academy of Science (Medical Sciences section), May, 1994.
12. Awarded first place in the student paper competition, The Annual meeting of the Virginia Branch of American Society for Microbiology, November, 1993.
13. Awarded first place in the student paper competition, Virginia Academy of Science (Medical Sciences Section), May, 1993.
14. Sigma Xi Grants-in-Aid of Research Award. Role of Autocrine Growth Factors in the Tumorigenic Transformation of T cells. $400, Spring, 1992. Plus matched award by the Biology Department, Virginia Tech, $400, Spring, 1992.

***Graduate Advisorships:***

* Served as major advisor for Miss Manal Abbas Spring 2007 – Summer 2010. Ph. D. thesis entitled: “The Induction of Tolerance to Normal Human Cell antigens for the Purpose of Production of Novel Monoclonal Antibodies Against Abnormal Human Tumor Cell Antigens”
* Served as major advisor for Miss Mysaa AlBuni , Fall 2004- Summer 2007. M. Sc. thesis entitled: “The Effect of Cyclosporin A on Tumor Cell Lines of Various Histological Origins”. Faculty of Science, Department of Biological Sciences, University of Jordan.
* Served as major advisor for Mr. Yasir Adil Turki, Spring 2004- Fall 2006, Ph. D. thesis entitled: “ Assessment of the Immunomodulatory and Antitumor effects of Some Medicinal Plants Extracts on Balb/c Mice”. Faculty of Science, Department of Biological Sciences, University of Jordan.
* Served as major advisor for Miss Sundus Mashallah, Spring 2001- Fall 2004, M. Sc. thesis entiteled: “ Production of Unique Monoclonal Antibody to be Used in Breast Cancer Diagnosis”. Faculty of Science, Department of Biological Sciences, University of Jordan.
* Served as major advisor for Mr. Wamidh Hadi Talib , Spring 2001- Fall 2004, M. Sc. thesis entitled: “ The Generation of Novel Monoclonal Antibodies to be Used in Diagnosis of Tumors of Lymphoid Origin”.
* ***Served as a co Advisor for the following students:***
* Mr. Riyadh Al-Najadah, faculty of Agriculture 2003-2005
* Mr. Ibrahim Al-Majaly, Faculty of Science 2011 – Fall (2012-2013)
* Miss Aysha Abu-Rub, Faculty of Medicine 2011 – Spring (2012-2013)

***Professional / National Committees:***

* Vaccine and Sera Committee. Jordanian Food and Drug Administration (JFDA) (January, 2009- February 2012).
* Committee for Student trials/affairs. (Fall and Spring 2010-2011)
* National Committee for Nanotechnology. Higher Council for Science and Technology (Fall 2008 – Spring 2009).

***Publications/ Patents:***

* + - 1. The Use of Bare or Functionalized Multiple element Magnetic Nanoparticles in Cancer Diagnosis and Therapy. INVENTORS: Khaled Najieb Elshuraydeh, Mona Rushdi Hassuneh, and Hanan Issa Malkawi. **Registered Patent # (39/2013), Ministry of Industry and Trade, Amman, Jordan. *Pending Approval- Priority (March, 2013.***

1. Mona R. Hassuneh, Mitzi Nagarkatti and Prakash S. Nagarkatti. 2013. The Role of Interleukin (IL)-10 in the Regulation of Tumorigenicity of a T Cell Lymphoma. ***Leukemia and Lymphoma***. 54(4):827-834.
2. Mona R. Hassuneh, Wamidh H. Talib and Maysaa’ A. Albini. Immunotoxicity Induced by Subtoxic Doses of Paraquat: Implication of Shifting Cytokine Gene Expression Towards TH17 Phenotype. ***Chemical Research in Toxicology*.** Oct 15;25(10):2112-6
3. Khaled N. Elshuraydeh, Hanan I. Malkawi, and Mona Hassuneh. **Bionanotechnology II: Global Prospects,** Chapter 17. Production of Bare Multiple-Element Magnetic Nanoparticles and Their Use in Fast Detection and Removal of Pathogenic Bacteria from Water Resources. 2011, Taylor & Francis Group Publishing, London, GB. P: 315-326.
4. Anticancer and Antibacterial Agents, UK registered patent (GB2442951). Inventors: Al- Qaisi, A., Hiari, Y. M., M., Zahra J., Hassuneh, M. R and El-Abadelah, M. **Approved Feb., 2011.**
5. Method for the Production of Bare (Non-functionalized) Multiple Element Magnetic Nanoparticles and their use in Fast Detection and Removal of Pathogenic Bacteria from Water Resources. INVENTORS: Khaled Najieb Elshuraydeh, Hanan Issa Malkawi, and **Mona Hassuneh**. **Registered Patent # (2450), Ministry of Industry and Trade, Amman, Jordan. Approved Feb., 2008.**
6. Abu Shuheil, M. Y., Hassuneh, M. R. Al-Hiari, Y. M., Qaisi, A. M. and El-Abadelah, M. M. **2007.** Heterocycles[*h*]- fused onto 4-oxoquinoline-3-carboxylic acid, III Facile synthesis and antitumor activity of model heterocycles [*a*]-fused onto pyrido[2,3-f]quinoxaline-3-carboxylic acids.  ***Heterocycles***. 71(10): 2155-2172.
7. [a] fused heterocyclic-pyrido [2,3-f] quinoxaline-2-carboxylic acid derivatives and their pyriod [3,2-g] analogs, a process for their preparation and their potential uses as anticancer and antibacterial agents”.  **Registered Patent # (2345), Ministry of Industry and Trade, Amman, Jordan. Approved 2007.**
8. Camacho IA, Hassuneh MR, Nagarkatti M, Nagarkatti PS. **2001**. Enhanced activation-induced cell death as a mechanism of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity in peripheral T cells. ***Toxicology***. 165(1):51-63.
9. Abuharfeil N, Sarsour E, Hassuneh M. **2001**. The effect of sodium nitrite on some parameters of the immune system. ***Food Chem Toxicol.*** 39(2):119-24.
10. Zeytun A, Hassuneh M, Nagarkatti M, Nagarkatti PS. **1997**. Fas-Fas ligand-based interactions between tumor cells and tumor-specific cytotoxic T lymphocytes: a lethal two-way street. ***Blood***. 90(5):1952-9.
11. Hassuneh, M., Nagarkatti, P. S. and Nagarkatti, M. **1997**. Evidence for the participation of interleukin-2 and interleukin-4 in the regulation of autonomous growth and tumorigenesis of transformed cells of lymphoid origin. ***Blood*** **89**: 610.
12. Hassuneh, M., Nagarkatti, P.S. and Nagarkatti, M. **1996**. Dysregulation of Cytokine Gene Expression as a cause of T cell Transformation and *In vivo* Tumorigenicity. In Molecular Biology of Hematopoiesis*,* Ed. N. G. Abraham, Plehum Press, New York.
13. Nagarkatti, M., Hassuneh, M., Seth, A., Manickasundari, K. and Nagarkatti, P. **1994.** Constitutive Activation of IL-2 Gene in the Induction of Spontaneous *ex vivo* Transformation and Tumorigenicity of T cells. ***Proc. Natl. Acad. Sci. USA***. **91**:7638.
14. Nagarkatti, M., Hassuneh, M., Seth, A. and Nagarkatti, P. S. **1993**. Inhibition of Tumorigenicity of an *ex vivo* transformed T cell clone using antibodies against interleukin-2 and interleukin-2 receptors. Recent Adv. Chemotherapy p:998-999.
15. Hammond, D., Nagarkatti, P., Gote, L., Seth, A., Hassuneh, M. and Nagarkatti, M. **1993.** Double-negative T cells from MRL-Lpr/Lpr mice mediate cytotoxic activity when triggered through adhesion molecules and constitutively express perforin gene. ***J. Exp. Med****.* **178**:2225.

**Patents in preparation**

* + - 1. Novel Monoclonal Antibodies that Recognize Pan Leukemia Antigens. INVENTORS: Mona Rushdi Hassuneh, Manal Abbas, Majida Hassan.
      2. Monaoclonals Antibodies to Cannabinoid Receptors. INVENTORS: Mona Rushdi Hassuneh, Narendra P. Singh, Mitzi Nagarkatti and Prakash Nagarkatti.

***Consultancies:***

Have performed several studies/reports through the Center for Consultations at University of Jordan for private sector companies:

* The antitumor potential of silver tartrate.
* The efficacy of Aquacil reagent as antiseptic agent in drinking water.
* The efficacy of linalool (Coriander oil) as a hypoglycemic agent.

***Presentations at Meetings:***

* *Manal Abbas and Mona R. Hassuneh*. **Production of Novel Monoclonal Antibodies against Pan Leukemia Antigens Following Induction of Tolerance to Normal Antigens in Balb/C Mice”**. The 4th International Meeting fro Immunology and Allergy, Amman– Jordan. 19-21 September, 2012.
* Mona R. Hassuneh, Sawsan A. Oran, Yassir Turki and Maysaa’ Albinni. **The Immunomodulatory and Antitumor Effects of G*lobularia arabica***. Presented at the Second AACR International Conference on “Advances in Cancer Research: From the Laboratory to the Clinic”. March, **2010**, Dead Sea, Jordan.
* Mona R. Hassuneh, Khaled N. Elshuraydeh and Hanan I. Malkawi. **An Assessment of the Feasibility of Using Novel Multiple-element Magnetite Nanoparticles (MMN) in Cancer Diagnosis and Therapy.**  Presented at the Nanostructured Advanced Materials International and regional conference. November 2008 Amman, Jordan.
* Mona R. Hassuneh, Maysaa’ A. Albinni, Yassir A. Turki and Sawsan A. Oran. **"The Immunomodulatory and Antitumor Effects of the Crude Aqueous Suspension of *Globularia arabica* Leaves in Balb/c Mice.**" The 1st international symposium on medicinal plants, their cultivation and aspects of uses, Petra– Jordan. 15-16 October, 2008.
* *Mona R. Hassuneh, Yassir A. Turki and Sawsan A. Oran.*  **The Immunomodulatory and Antitumor Effects of the Crude Aqueous Suspension of *Juniperus phoenica* Cones in Balb/c Mice.** Presented at the “Scientific day of Medicinal, Aromatic and Poisonous Plants” at Zarka University College, Al-Balqa’ Applied University, Amman Jordan, April 2008.
* *Mona R. Hassuneh, Sundos H. Mashallah and Wamidh H. Tali.*  **Investing the Genetic Similarity between Mice and Human to Generate Novel Monoclonal Antibodies against Human Cancers.**   Presented at the American Association for Cancer Research “Advances in Cancer Research From the Laboratory to the Clinic”. March, 2008, Dead Sea, Jordan.
* *Maysaa’ A. Albinni and Mona R. Hassuneh.* **An Insight into the Mechanism of the Anticancer Effect of Cyclosporin A**. Presented at the American Association for Cancer Research “Advances in Cancer Research From the Laboratory to the Clinic”. March, 2008, Dead Sea, Jordan.
* Mona R. Hassuneh.  **A Possible Role of Interleukin 15 in the Maintenance of Human Cancer Cell Lines *in Vitro*.**  Presented at the 12th International Congress of Mucosal Immunity (ICMI), Boston, MA, USA, June, 2005.
* Mona Hassuneh. **The Immunotoxic Effects of Paraquat***.* 12th International Congress of Immunology (ICI) and 4th Annual Conference of the Federation of Clinical Immunology Societies (FOCIS). Montréal, Canada, July 18th to 23rd , 2004
* Mona Hassuneh, Mitzi Nagarkatti, Prakash Nagarkatti. **Effect of Interleukin (IL)-10 on the Tumorigenicity of T Cell Lymphomas.** 11th International Congress for Immunology. Stockholm, Sweden. 22nd - 27th of July, 2001
* Lombard, C., Mc KallipR., Zeytun, A., Hassuneh, M. Nagarkatti, M. and Nagarkatti, P. S. **Characterization of tumor-derived Fas-ligand and its ability to induce apoptosis in immune cells of the host**. 3rd International Cancer Gene Therapy meeting, Pasteur Institute, July 2000. Paris, France.
* Hassuneh, M., Nagarkatti, M. and Nagarkatti, P. **Role of interleukin 10 in the tumorigenicity of lymphomas**. 20th Annual Seminar of Cancer Researchers in Virginia Journal. March 11th, 2000. Norfolk, VA.
* Nagarkatti, P. S., Zeytun, A. and Hassuneh, M. **Apoptosis induced by cytotoxic T cells and reverse apoptosis mediated by tumor cells may play a crucial role in host-tumor interactions.**  4th International Union of Biochemistry and Molecular Biology. July 14-17, 1996. Edinburgh, Scotland.
* Nagarkatti, M. and Hassuneh, M. **Dysregulation of cytokine gene expression as a cause of T cell transformation and *in vivo* tumorigenecity*.*** Presented at the 9th symposium of the Molecular Biology of Hematopoiesis. June 23-27, 1995. Genoa, Italy.
* Hassuneh, M. Nagarkatti, P.S. and Nagarkatti, M. **Dysregulation of the cytokine gene expression as a cause of T cell transformation and *in vivo* tumorigenecity.** Presented at the National Am. Assoc. Immunol. Meeting, April 9-13, 1995. Atlanta, GA.
* Nagarkatti, M. Hassuneh, M. **Dysregulation of the cytokine gene expression as a cause of T cell transformation and the role of immunosuppressive molecules in tumorigenicity.** Presented at the Virginia -Maryland Regional College of Veterinary Medicine Seventh Annual Research Symposium, January, 1995. Blacksburg, VA.
* Nagarkatti, M. and Hassuneh, M. **Dysregulation of the IL-2 gene expression as a cause of T cell transformation and its potential hazard in immunotherapy or immunorehabilitation.** Presented at the International Congress of Immunorehabilitation. July, 1994. Sochi, Russia.
* Hassuneh, M. and Nagarkatti, M. **The transformation and maintenance of T cell lymphomas as a result of IL-2 autocrine stimulation.** Presented at the 72nd annual meeting of the Virginia Academy of Science at James Madison University. May, 21st, 1994. Harrisonburg, VA.
* Hassuneh, M. and Nagarkatti, M. **Role of IL-2 as an autocrine growth factor in the transformation and maintenance of T cell lymphomas.** 14th Annual Seminar of Cancer Researchers in Virginia. March, 26th, 1994. Blacksburg, VA.
* Hassuneh, M. and Nagarkatti, M. **Perturbation in autocrine growth factor production as a cause of T cell transformation and its regulation using growth factor-specific antibodies or antisense oligonucleotides.** Presented at the Annual Meeting of the Virginia Branch of American Society for Microbiology. Nov, 1993. Lexinton,VA.
* Nagarkatti, M., Hassuneh, M. and Seth, A. **Inhibition of autocrine growth and tumorigenicity induced by a T cell clone *in vivo* using monoclonal antibodies against cytokines and cytokines receptors.** Presented at the 18th International Congress of Chemotherapy. July,1993. Stockholm, Sweden.
* Hassuneh, M. and Nagarkatti, M. **Role of autocrine growth factors in tumorigenic transformation of T cells.** Presented at the 71st meeting of the Virginia Academy of Science at old Dominion University. May 20-21, 1993. Norfolk, VA.
* Hassuneh, M. and Nagarkatti, M. **Role of IL-2 as an autocrine growth factor in T cell transformation and tumorigenesis.** Presented at the American Cancer Society, 13th Annual Cancer Researchers in Virginia Symposium. April 24th, 1993. Richmond, VA.